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EXAMINER

SANTIAGO CORDERO, MARIVELISSE

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/696,502	Applicant(s) CSAPO ET AL.	
	Examiner Marivelisse Santiago-Cordero	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-8,10-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,10-12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments (see Remarks, filed on 2/9/07), with respect to 35 U.S.C 112 rejections of claims 11-19, have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

2. Applicant's arguments, with respect to the 35 U.S.C 102(b) rejections, have been fully considered but they are not persuasive.

Regarding claims 1, 6, and 11, Applicant argues that Jolma (Patent No.: 6,011,971) fails to disclose a hard handoff region, or that it is a portion of the second wireless network, or that the hard handoff is performed when the mobile station reaches a border of the hard handoff region (Remarks: page 12, last paragraph). In response, the Examiner respectfully disagrees. As stated in the last Office Action, Jolma performs a hard handoff between overlapping stations BTS11 and BTS 21 (Fig. 4; col. 5, lines 35-39 and 49-53). At the outset, it is an inherent feature, and/or an obvious expedient thereof, that to perform a successful hard handoff for a mobile station between two base transceiver stations in different networks, such mobile station must reach a border of a hard handoff region or must be located in the hard handoff region. Once it is determined that the mobile station is in a hard handoff region, the base station controller decides, among other things, whether the hard handoff should occur, to which base station, and/or when it should occur. Accordingly, since Jolma does teach BTS11 and BTS21 in overlapping arrangement and successfully performing the hard handoff between these stations (Fig. 4; col. 5, lines 35-39 and 49-53), the mobile station must have reached a border of a hard handoff region and/or must have been located in a hard handoff region; thus, disclosing a hard handoff region

that it is a portion of the second wireless network, and the hard handoff is performed when the mobile station reaches a border of the hard handoff region as claimed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6-8, 11-12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Jolma (Patent No.: 6,011,971).

Regarding claim 1, Jolma discloses for use in a first wireless network, a border base station capable of providing reliable hard handoffs between the first wireless network and a second wireless network, the border base station comprising:

a base station controller (Fig. 4, reference BSC1) operable to manage communications resources within the first wireless network (Fig. 4; note the network encompassed by BSC1 and its respective base transceiver stations and respective coverage areas);

a first base transceiver station (Fig. 4, reference BTS12) coupled to the base station controller (Fig. 4), the first base transceiver station operable to provide communication for a mobile station in the first wireless network (Fig. 4); and

a transition base transceiver station (Fig. 4, reference BTS11) coupled to the base station controller (Fig. 4) and located in proximity to a second base transceiver station (Fig. 4, reference BTS21), the transition base transceiver station operable to provide communication for the mobile station in the second wireless network (Fig. 4; note the network encompassed by BSC2 and its

respective base transceiver stations and respective coverage areas), the second base transceiver station part of the second wireless network (Fig. 4; note the network encompassed by BSC2 and its respective base transceiver stations and respective coverage areas) and operable to provide communication for the mobile station in the second wireless network (Fig. 4),

wherein the base station controller is further operable to perform a hard handoff for the mobile station between the transition base transceiver station and the second base transceiver station (col. 5, lines 25-30 and 50-51); and

wherein the base station controller is further operable to perform the hard handoff for the mobile station between the transition base transceiver station and the second base transceiver station when the mobile station reaches a border for a hard handoff region (Fig. 4; col. 5, lines 35-39 and 50-53; see also *Response to Arguments* section above), the hard handoff region a portion of the second wireless network (Fig. 4).

Regarding claim 2, Jolma discloses the border base station of Claim 1, the base station controller further operable to perform a soft handoff for the mobile station between the first base transceiver station and the transition base transceiver station (col. 5, lines 39-41).

Regarding claim 3, Jolma discloses the border base station of Claim 2, the base station controller operable to perform the soft handoff for the mobile station between the first base transceiver station and the transition base transceiver station when the mobile station reaches an overlap region between the first wireless network and the second wireless network (Fig. 4; col. 5, lines 33-41).

Regarding claim 6, Jolma discloses a first wireless network comprising a plurality of border base stations, each one of the border base stations capable of providing reliable hard

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handoffs between the first wireless network and a second wireless network, each border base station comprising:

- a base station controller (Fig. 4, reference BSC1) operable to manage communications resources within the first wireless network (Fig. 4; note the network encompassed by BSC1 and its respective base transceiver stations and respective coverage areas);

- a first base transceiver station coupled to the base station controller (Fig. 4, reference BTS12), the first base transceiver station operable to provide communication for a mobile station in the first wireless network (Fig. 4); and

- a transition base transceiver station (Fig. 4, reference BTS11) coupled to the base station controller (Fig. 4) and located in proximity to a second base transceiver station (Fig. 4, reference BTS21), the transition base transceiver station operable to provide communication for the mobile station in the second wireless network (Fig. 4; note the network encompassed by BSC2 and its respective base transceiver stations and respective coverage areas), the second base transceiver station part of the second wireless network (Fig. 4) and operable to provide communication for the mobile station in the second wireless network (Fig. 4),

wherein the base station controller is further operable to perform a hard handoff for the mobile station between the transition base transceiver station and the second base transceiver station (col. 5, lines 25-30 and 50-51); and

wherein the base station controller operable to perform the hard handoff for the mobile station between the transition base transceiver station and the second base transceiver station when the mobile station reaches a border for a hard handoff region (Fig. 4; col. 5, lines 35-39

and 50-53; see also *Response to Arguments* section above), the hard handoff region a portion of the second wireless network (Fig. 4).

Regarding claim 7, Jolma discloses the wireless network of Claim 6, the base station controller further operable to perform a soft handoff for the mobile station between the first base transceiver station and the transition base transceiver station (col. 5, lines 39-41).

Regarding claim 8, Jolma discloses the wireless network of Claim 7, the base station controller operable to perform the soft handoff for the mobile station between the first base transceiver station and the transition base transceiver station when the mobile station reaches an overlap region between the first wireless network and the second wireless network (Fig. 4; col. 5, lines 33-41).

Regarding claim 11, Jolma discloses for use in a border base station in a first wireless network, a method for providing reliable hard handoffs between the first wireless network and a second wireless network, the method comprising:

performing a soft handoff for a mobile station between a first base transceiver station (Fig. 4, reference BTS12) in the first wireless network (Fig. 4; note the network encompassed by BSC1 and its respective base transceiver stations and respective coverage areas) and a transition base transceiver station (Fig. 4, reference BTS11) in the first wireless network (Fig. 4) (col. 5, lines 39-41); and

performing a hard handoff for the mobile station between the transition base transceiver station and a second base transceiver station (Fig. 4, reference BTS21) in the second wireless network (Fig. 4; note the network encompassed by BSC2 and its respective base transceiver stations and respective coverage areas) (col. 5, lines 50-51) when the mobile station reaches a

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border for a hard handoff region (Fig. 4; col. 5, lines 35-39 and 50-53; see also *Response to Arguments* section above), the hard handoff region a portion of the second wireless network (Fig. 4), the transition base transceiver station located in proximity to the second base transceiver station (Fig. 4), without performing an intervening hard handoff between the first base transceiver station and the transition base transceiver station (Fig. 4; col. 5, lines 39-53).

Regarding claim 12, Jolma discloses the method of Claim 11, performing the soft handoff for the mobile station comprising performing the soft handoff when the mobile station reaches an overlap region between the first wireless network and the second wireless network (Fig. 4; col. 5, lines 33-41).

Regarding claim 14, Jolma discloses the method of Claim 11, performing the soft handoff between the first base transceiver station and the transition base transceiver station comprising performing the soft handoff from the first base transceiver station to the transition base transceiver station (col. 5, lines 39-41), and performing the hard handoff between the transition base transceiver station and the second base transceiver station comprising performing the hard handoff from the transition base transceiver station to the second base transceiver station (col. 5, lines 50-51).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 5, 10, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jolma.

Regarding claims 5 and 10, Jolma discloses the border base station of Claim 1 and the wireless network of claim 6 (see above), but fail to specifically disclose the first base transceiver station operable to provide communication for the mobile station in the first wireless network **at a first carrier frequency**, the transition base transceiver station operable to provide communication for the mobile station in the second wireless network **at the first carrier frequency**, and the second base transceiver station operable to provide communication for the mobile station in the second wireless network **at a second carrier frequency**.

However, Jolma does suggests the first base transceiver station operable to provide communication for the mobile station in the first wireless network **at a first carrier frequency** and the transition base transceiver station operable to provide communication for the mobile station in the second wireless network **at the first carrier frequency**, since Jolma discloses that a soft handoff occurs between the first base transceiver station and the transition base transceiver station (col. 5, lines 39-41). It was notoriously well known in the art at the time of invention by applicant that soft handoff occurs between the same frequencies. Consequently, if Jolma discloses a soft handoff between the first base transceiver station and the transition base transceiver station, then, Jolma does suggests that they both operate at the same frequency, i.e., at a first carrier frequency as claimed.

In addition, Jolma suggests the second base transceiver station operable to provide communication for the mobile station in the second wireless network at a second carrier frequency, since Jolma discloses that a hard handoff occurs between the transition base transceiver station and the second base transceiver station (col. 5, lines 50-51). It was notoriously well known in the art at the time of invention by applicant that hard handoff occurs

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between different frequencies. Consequently, if Jolma discloses a hard handoff between the transition base transceiver station and the second base transceiver station, and, as stated above, the transition base transceiver station operates at the first carrier frequency, then, Jolma does suggest that second base transceiver station operates at a second carrier frequency as claimed.

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to operate the first transceiver station and the transition base transceiver station at a first carrier frequency and the second transceiver station at a second carrier frequency as suggested by Jolma because for the advantages of performing soft and hard handoffs as appropriate and guaranteeing the continuity of a call.

Regarding claim 15, Jolma discloses the method of claim 11 (see above). Jolma fails to specifically disclose performing the soft handoff between the first base transceiver station and the transition base transceiver station comprising performing the soft handoff from the transition base transceiver station to the first base transceiver station, and performing the hard handoff between the transition base transceiver station and the second base transceiver station comprising performing the hard handoff from the second base transceiver station to the transition base transceiver station.

However, it was notoriously well known in the art at the time of invention by applicant that mobile stations may be in constant movement and may return through the same path to the originating point (system).

Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to perform the soft handoff between the first base transceiver station and the transition base transceiver station comprising performing the soft handoff from the transition

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base transceiver station to the first base transceiver station of Jolma, and performing the hard handoff between the transition base transceiver station and the second base transceiver station comprising performing the hard handoff from the second base transceiver station to the transition base transceiver station of Jolma because the mobile station may be in constant movement; consequently, returning through the same path to the originating system.

Regarding claim 16, Jolma discloses the method of claim 11, further comprising: providing communication for the mobile station at a first carrier frequency in the first wireless network (Fig. 4; note that it is inherent that communication is provided at a first carrier frequency in the wireless network), but fail to specifically disclose providing communication for the mobile station at the first carrier frequency and at a second carrier frequency in the second wireless network.

However, Jolma does suggests further comprising: providing communication for the mobile station at the first carrier frequency and at a second carrier frequency in the second wireless network (Fig. 4; col. 5, lines 33-53; note that the second network is encompassed by BSC2 and its respective base transceiver stations and respective coverage areas, including coverage area 41, which overlaps with the first network, encompassed by BSC1 and its respective base transceiver stations and respective coverage areas). See rational previously used for claims 5 and 10 above and note that both BTS11 and BTS21 are in overlapping coverage area 41, where the hard handoff occurs.

Regarding claim 17, in the obvious combination, Jolma discloses providing communication for the mobile station at the first carrier frequency in the first wireless network comprising providing communication for the mobile station at the first carrier frequency with the

first base transceiver station (Fig. 4; note that as stated above for claim 16, it is inherent that communication is provided at the first carrier frequency in the first wireless network).

Regarding claim 18, in the obvious combination, Jolma fails to specifically disclose providing communication for the mobile station at the first carrier frequency in the second wireless network comprising providing communication for the mobile station at the first carrier frequency with the transition base transceiver station.

However, Jolma does suggests providing communication for the mobile station at the first carrier frequency in the second wireless network comprising providing communication for the mobile station at the first carrier frequency with the transition base transceiver station (See rational previously used for claims 5 and 10 above).

Regarding claim 19, in the obvious combination, Jolma fails to specifically disclose providing communication for the mobile station at the second carrier frequency in the second wireless network comprising providing communication for the mobile station at the second carrier frequency with the second base transceiver station.

However, Jolma does suggests providing communication for the mobile station at the second carrier frequency in the second wireless network comprising providing communication for the mobile station at the second carrier frequency with the second base transceiver station (See rational previously used for claims 5 and 10 above).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

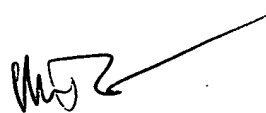
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marivelisse Santiago-Cordero whose telephone number is (571) 272-7839. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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MSC



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